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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,853	02/20/2004	Bernard Hammond JR.	65725-0044	7668
23552	7590	01/10/2006	EXAMINER	
MERCHANT & GOULD PC P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903			SWERDLOW, DANIEL	
			ART UNIT	PAPER NUMBER
			2646	

DATE MAILED: 01/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/783,853

Applicant(s)

HAMMOND, BERNARD

Examiner

Daniel Swerdlow

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13, 15-23 and 25-31 is/are rejected.
- 7) ☒ Claim(s) 14 and 26 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the signal compensators and the digital signal processor must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 through 6, 9 through 13, 15 through 21 and 24 are rejected under 35

U.S.C. 102(b) as being anticipated by German et al. (US Patent 6,186,474).

4. Regarding Claim 1, German discloses a crosstalk compensating connector (Fig. 1) that includes a first compensation region (column 4, lines 21-34) that compensates for crosstalk between pairs I and III of a modular connector (i.e., intra-connector crosstalk) and compensates for crosstalk created by a 25 pair connector (i.e., alien crosstalk from a number of adjacent connectors) (column 8, lines 58-61).

5. Regarding Claim 2, German further discloses a crosstalk compensating connector (Fig. 1) in which the amount of compensation is adjusted (i.e., a signal compensator is determined) (column 6, lines 42) on a trial and error basis. Adjusting on a trial and error basis inherently involves determination of amount of compensation based on some measurement of induced crosstalk by a test signal.

6. Regarding Claim 3, German further discloses trimming each capacitive member on a trial and error basis. Because there are capacitive members between each connector and its neighboring connector (Figs. 7 and 8, reference 74), this includes determination of amount of compensation based on some measurement of induced crosstalk by a test signal for each adjacent connector.

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7. Regarding Claim 4, German further discloses trimming each capacitive member on a trial and error basis. Because there are capacitive members between each connector and pairs in the neighboring connectors (Figs. 7 and 8, reference 74), this includes determination of amount of compensation based on some measurement of induced crosstalk by a test signal for a disturber pair of an adjacent connector.

8. Regarding Claim 5, German further discloses capacitive members that correspond to the second signal compensator claimed between each connector and its neighboring connector (Figs. 7 and 8, reference 74).

9. Regarding Claim 6, German further discloses capacitive members that correspond to the second signal compensator claimed generated by conductive elements of a circuit board (Figs. 7 and 8, reference 74).

10. Regarding Claim 9, German discloses a crosstalk compensating connector (Fig. 1) in which the amount of compensation is adjusted (i.e., a signal compensator is determined) (column 6, lines 42) on a trial and error basis. As shown above apropos of Claim 1, German discloses compensating alien crosstalk from a number of adjacent connectors. Further, adjusting on a trial and error basis inherently involves determination of amount of compensation based on some measurement of induced crosstalk.

11. Regarding Claims 10 and 11, German further discloses coupling compensation from two different conductors of a connector to a single conductor of an adjacent connector (Figs. 7 and 8, reference 74). As such, German discloses aggregation of measurement to determine compensation for alien crosstalk from the disturber connector.

12. Regarding Claim 12, German further discloses capacitive members that correspond to the second signal compensator claimed between each connector and its neighboring (i.e., adjacent) connectors (Figs. 7 and 8, reference 74).

13. Regarding Claim 13 German further discloses coupling compensation from two different conductors of a connector to a single conductor of an adjacent connector (Figs. 7 and 8, reference 74). As such, German discloses aggregation of compensation for alien crosstalk from the disturber connectors.

14. Regarding Claims 15 and 16, German further discloses capacitive members between each connector and pairs in the neighboring connectors (Figs. 7 and 8, reference 74), this includes determination of amount of compensation based on aggregate induced crosstalk by a signal of each adjacent disturber connector.

15. Regarding Claim 17, German further discloses determination of compensation by mathematical modeling (i.e., simulating at least part of a data network) (column 6, lines 39-42).

16. Regarding Claim 18, German discloses a crosstalk compensating connector (Fig. 1) that includes a first compensation region (column 4, lines 21-34) that corresponds to the first signal compensator claimed and compensates for crosstalk between pairs I and III of a modular connector (i.e., intra-connector crosstalk) and additional crosstalk compensation that corresponds to the second signal compensator claimed and compensates for crosstalk created by a 25 pair connector (i.e., alien crosstalk from a number of adjacent connectors) (column 8, lines 58-61).

17. Regarding Claim 19, German further discloses capacitive members that correspond to the second signal compensator claimed between each connector and its neighboring (i.e., adjacent) connectors (Figs. 7 and 8, reference 74).

18. Regarding Claim 20, German further discloses capacitive members that correspond to the second signal compensator claimed between each connector and its neighboring connector (Figs. 7 and 8, reference 74).

19. Regarding Claim 21, German further discloses capacitive members that correspond to the second signal compensator claimed generated by conductive elements of a circuit board (Figs. 7 and 8, reference 74).

20. Regarding Claim 24, German further discloses a crosstalk compensating connector (Fig. 1) in which the amount of compensation is adjusted (i.e., a signal compensator is determined) (column 6, lines 42) on a trial and error basis. Adjusting on a trial and error basis inherently involves measurement of induced crosstalk using a test assembly.

Claim Rejections - 35 USC § 103

21. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

22. Claims 7 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over German in view of Guilbert (US Patent 5,350,324).

23. Regarding Claim 7, in addition to the elements shown above apropos of Claim 1, German discloses crosstalk compensation using capacitive coupling (column 6, lines 5-9). Therefore German anticipates all elements of Claim 7 except additional compensation by inductive coupling. Guilbert discloses crosstalk compensation in connectors using both inductive and

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capacitive coupling (Fig. 8, reference 52, 58, 64, 66, 72, 74; column 6, lines 3-10). Guilbert further discloses that such an arrangement provides full compensation for parasitic reactive coupling (column 2, lines 13-15). It would have been obvious to one skilled in the art at the time of the invention to apply the combined inductive and capacitive coupling taught by Guilbert to the connector taught by German for the purpose of realizing the aforesaid advantage.

24. Regarding Claim 22, in addition to the elements shown above apropos of Claim 18, German discloses crosstalk compensation using capacitive coupling (column 6, lines 5-9). Therefore German anticipates all elements of Claim 22 except additional compensation by inductive coupling. Guilbert discloses crosstalk compensation in connectors using both inductive and capacitive coupling (Fig. 8, reference 52, 58, 64, 66, 72, 74; column 6, lines 3-10). Guilbert further discloses that such an arrangement provides full compensation for parasitic reactive coupling (column 2, lines 13-15). It would have been obvious to one skilled in the art at the time of the invention to apply the combined inductive and capacitive coupling taught by Guilbert to the connector taught by German for the purpose of realizing the aforesaid advantage.

25. Claims 8 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over German in view of Cioffi (US Patent 5,887,032).

26. Regarding Claim 8, as shown above apropos of Claim 1, German anticipates all elements of except generation of compensation by digital signal processing. Cioffi discloses crosstalk compensation generated by digital signal processing (Fig. 3, reference 302; column 9, lines 38-44). Cioffi further discloses that such an arrangement is useful in high speed data transmissions (column 3, lines 41-44). It would have been obvious to one skilled in the art at the time of the

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invention to apply the digital signal processing taught by Cioffi to the connector taught by German for the purpose of realizing the aforesaid advantage.

27. Regarding Claim 23, as shown above apropos of Claim 18, German anticipates all elements of except generation of compensation by digital signal processing. Cioffi discloses crosstalk compensation generated by digital signal processing (Fig. 3, reference 302; column 9, lines 38-44). Cioffi further discloses that such an arrangement is useful in high speed data transmissions (column 3, lines 41-44). It would have been obvious to one skilled in the art at the time of the invention to apply the digital signal processing taught by Cioffi to the connector taught by German for the purpose of realizing the aforesaid advantage.

28. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over German in view of Kunz et al. (US Patent 5,971,813).

29. Regarding Claim 25, as shown above apropos of Claim 18, German anticipates all elements except shield structures separating connectors. Kunz discloses a modular connector with a shield structure (Fig. 1, reference 16; column 4, lines 15-18). Kunz further discloses that such an arrangement provides protection from electromagnetic radiation. It would have been obvious to one skilled in the art at the time of the invention to apply the shielding taught by Kunz to the connector taught by German for the purpose of realizing the aforesaid advantage.

30. Claims 27 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over German in view of Fair et al. (US Patent 6,419,526).

31. Regarding Claims 27, as shown above apropos of Claim 18, German anticipates all elements except adjacent connectors oriented at different angles. Fair discloses a modular multiport assembly in which adjacent connectors are inverted (i.e., oriented at different angles) (Fig. 3b; column 2, lines 42-55). Fair further discloses that such an arrangement provides space efficiency. It would have been obvious to one skilled in the art at the time of the invention to apply the inverted adjacent connectors taught by Fair to the connector taught by German for the purpose of realizing the aforesaid advantage.

32. Regarding Claim 29, as shown above apropos of Claim 18, German anticipates all elements except inverted adjacent connectors. Fair discloses a modular multiport assembly with inverted adjacent connectors (Fig. 3b; column 2, lines 42-55). Fair further discloses that such an arrangement provides space efficiency. It would have been obvious to one skilled in the art at the time of the invention to apply the inverted adjacent connectors taught by Fair to the connector taught by German for the purpose of realizing the aforesaid advantage.

33. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over German in view of Follingstad (US Patent 6,537,106).

34. Regarding Claim 28, as shown above apropos of Claim 18, German anticipates all elements except depth-staggered connectors. Follingstad discloses a modular jack assembly with angled connector modules (Fig. 1). As depicted, the individual connectors are disposed at different depths relative to the front panel. Follingstad further discloses that such an arrangement prevents cable damage and loss of performance (column 1, lines 31-40). It would have been obvious to one skilled in the art at the time of the invention to apply the angled

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connector modules taught by Follingstad to the connector taught by German for the purpose of realizing the aforesaid advantage.

35. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over German in view of Belopolsky et al. (US Patent 6,036,547).

36. Regarding Claim 30, as shown above apropos of Claim 18, German anticipates all elements except offset of adjacent connectors. Belopolsky discloses a modular jack assembly with offset connectors (column 2, lines 62-67). Belopolsky further discloses that such an arrangement provides surprisingly and unexpectedly suppressed mutual crosstalk. It would have been obvious to one skilled in the art at the time of the invention to apply the connector offsetting taught by Belopolsky to the connector taught by German for the purpose of realizing the aforesaid advantage.

37. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over German in view of Morgan et al. (US Patent 5,129,842).

38. Regarding Claim 31, as shown above apropos of Claim 18, German anticipates all elements except adjacent connectors in orthogonal planes. Morgan discloses a modular jack assembly with a zigzag configuration (i.e., adjacent connectors in orthogonal planes (Fig. 6; column 2, lines 35-39). Morgan further discloses that such an arrangement is advantageous where space is at a premium. It would have been obvious to one skilled in the art at the time of the invention to apply the connector offsetting taught by Morgan to the connector taught by German for the purpose of realizing the aforesaid advantage.

Double Patenting

39. Claims 1 through 31 of this application conflict with claims 1 through 31 of Application No. 11/058,902. 37 CFR 1.78(b) provides that when two or more applications filed by the same applicant contain conflicting claims, elimination of such claims from all but one application may be required in the absence of good and sufficient reason for their retention during pendency in more than one application. Applicant is required to either cancel the conflicting claims from all but one application or maintain a clear line of demarcation between the applications. See MPEP § 822.

40. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

41. Claims 1 through 31 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1 through 31 of copending Application No. 11/058,902. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Allowable Subject Matter

42. Claims 14 and 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base

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claim and any intervening claims and if issues involving provisional double patenting are resolved.

43. The following is a statement of reasons for the indication of allowable subject matter:

44. Regarding Claim 14, as shown above apropos of Claim 9, German anticipates all elements of that claim. However, German discloses only providing compensation for alien crosstalk from immediately adjacent connectors and not from all connectors within two inches as claimed. As such, there is no teaching or suggestion in the prior art or in the knowledge of one of ordinary skill in the art to modify the connector disclosed by German to provide crosstalk compensation for interference from all connectors within two inches of a victim connector. Therefore Claim 14 is allowable matter.

45. Claim 26 contains limitations similar to those of Claim 14 and is allowable matter for the same reasons.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Swerdlow whose telephone number is 571-272-7531. The examiner can normally be reached on Monday through Friday between 7:30 AM and 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh H. Tran can be reached on 571-272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Daniel Swerdlow
Examiner
Art Unit 2646

ds
4 January 2006